

FORM PTO-1390 (Modified)
(REV 11-2000)

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

ATTORNEY'S DOCKET NUMBER

**TRANSMITTAL LETTER TO THE UNITED STATES
DESIGNATED/ELECTED OFFICE (DO/EO/US)
CONCERNING A FILING UNDER 35 U.S.C. 371**

PF990046

U.S. APPLICATION NO. (IF KNOWN, SEE 37 CFR

10/030070

INTERNATIONAL APPLICATION NO.
PCT/EP00/06634

INTERNATIONAL FILING DATE
12 July 2000 (12.07.00)

PRIORITY DATE CLAIMED
12 July 1999 (12.07.99)

TITLE OF INVENTION

METHOD AND DEVICE FOR ESTABLISHING A COMMUNICATION

APPLICANT(S) FOR DO/EO/US

Philippe Letellier

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☒ This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (24) indicated below.
4. ☐ The US has been elected by the expiration of 19 months from the priority date (Article 31).
5. ☒ A copy of the International Application as filed (35 U.S.C. 371 (c) (2))
 - a. ☐ is attached hereto (required only if not communicated by the International Bureau).
 - b. ☒ has been communicated by the International Bureau.
 - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☐ An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).
 - a. ☐ is attached hereto.
 - b. ☐ has been previously submitted under 35 U.S.C. 154(d)(4).
7. ☒ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371 (c)(3))
 - a. ☐ are attached hereto (required only if not communicated by the International Bureau).
 - b. ☐ have been communicated by the International Bureau.
 - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
 - d. ☒ have not been made and will not be made.
8. ☐ An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. ☒ An oath or declaration of the inventor(s) (35 U.S.C. 371 (c)(4)).
10. ☐ An English language translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371 (c)(5)).
11. ☒ A copy of the International Preliminary Examination Report (PCT/IPEA/409).
12. ☒ A copy of the International Search Report (PCT/ISA/210).

Items 13 to 20 below concern document(s) or information included:

13. ☒ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
14. ☒ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
15. ☒ A **FIRST** preliminary amendment.
16. ☐ A **SECOND** or **SUBSEQUENT** preliminary amendment.
17. ☐ A substitute specification.
18. ☐ A change of power of attorney and/or address letter.
19. ☐ A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 35 U.S.C. 1.821 - 1.825.
20. ☐ A second copy of the published international application under 35 U.S.C. 154(d)(4).
21. ☐ A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).
22. ☒ Certificate of Mailing by Express Mail
23. ☒ Other items or information:

Return Postcard Receipt

EXPRESS MAIL LABEL NO. EL902321360US

DATE DEPOSITED: January 4, 2002

U.S. APPLICATION NO. (IF KNOWN, SEE 37 CFR <div style="font-size: 2em; font-weight: bold;">10/030070</div>		INTERNATIONAL APPLICATION NO. <div style="font-weight: bold;">PCT/EP00/06634</div>		ATTORNEY'S DOCKET NUMBER <div style="font-weight: bold;">PF990046</div>	
24. The following fees are submitted: BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5)) : <input type="checkbox"/> Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO \$1040.00 <input checked="" type="checkbox"/> International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO \$890.00 <input type="checkbox"/> International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO \$740.00 <input type="checkbox"/> International preliminary examination fee (37 CFR 1.482) paid to USPTO but all claims did not satisfy provisions of PCT Article 33(1)-(4) \$710.00 <input type="checkbox"/> International preliminary examination fee (37 CFR 1.482) paid to USPTO and all claims satisfied provisions of PCT Article 33(1)-(4) \$100.00 <div style="text-align: right;">ENTER APPROPRIATE BASIC FEE AMOUNT =</div>				CALCULATIONS PTO USE ONLY	
Surcharge of \$130.00 for furnishing the oath or declaration later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492 (e)).				\$0.00	
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		
Total claims	9 - 20 =	0	x \$18.00	\$0.00	
Independent claims	3 - 3 =	0	x \$84.00	\$0.00	
Multiple Dependent Claims (check if applicable). <input type="checkbox"/>				\$0.00	
TOTAL OF ABOVE CALCULATIONS =				\$890.00	
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27). The fees indicated above are reduced by 1/2.				\$0.00	
SUBTOTAL =				\$890.00	
Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492 (f)).				\$0.00	
TOTAL NATIONAL FEE =				\$890.00	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31) (check if applicable). <input type="checkbox"/>				\$40.00	
TOTAL FEES ENCLOSED =				\$930.00	
				Amount to be: refunded	\$
				charged	\$ 930.00
a. <input type="checkbox"/> A check in the amount of _____ to cover the above fees is enclosed. b. <input checked="" type="checkbox"/> Please charge my Deposit Account No. <u>07-0832</u> in the amount of <u>\$930.00</u> to cover the above fees. A duplicate copy of this sheet is enclosed. c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>07-0832</u> A duplicate copy of this sheet is enclosed. d. <input type="checkbox"/> Fees are to be charged to a credit card. WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.					
NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.					
SEND ALL CORRESPONDENCE TO:					
Mr. Joseph S. Tripoli THOMSON multimedia Licensing Inc. Patent Department PO Box 5312 Princeton, New Jersey 08540			<div style="text-align: center;"> SIGNATURE </div> <div style="text-align: center;"> PAUL P. KIEL NAME </div> <div style="text-align: center;"> 40,677 REGISTRATION NUMBER </div> <div style="text-align: center;"> January 4, 2002 DATE </div>		

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Philippe Letellier
Filed : Herewith
For : METHOD AND DEVICE FOR ESTABLISHING A
COMMUNICATION

PRELIMINARY AMENDMENT

Hon. Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231

Sir:

In the US national phase application of PCT/EP00/06634 filed
herewith, please enter the following amendments:

IN THE SPECIFICATION:

On Page 1, line 2, insert the following paragraph:

-- This application claims the benefit, under 35 U.S.C. § 365 of
International Application PCT/EP00/06634, filed July 12, 2000, which was published
in accordance with PCT Article 21(2) on January 18, 2001 in English and which
claims the benefit of European patent application No. 99401752.3 filed
July 12, 1999.--

IN THE CLAIMS:

Please cancel claims 1-3 and add new claims 4-12 as follows:

4. (NEW) Method for establishing communications in a system comprising at least
two television receiver terminals and a server linked to said television receiver
terminals by a network comprising the steps of :

- initiating, by a first user of a first television receiver terminal, a
transmission of data to said server, said data relative to the program watched by the
said user on said terminal and informing said server that said first user wishes to
communicate ;

- checking, by said server, whether other users connected to the server want

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to communicate ;

- based on data relative to said other users matching the data of the first user, selecting at least a second user among said others users ; and
- establishing a communication between said first user and said at least one second user.

5. (NEW) Method according to the claim 4 comprising :

- a step of sending a stopping signal from a television receiver terminal of an user to the server ;
- a step of sending a disconnection signal from the server to the other users communicating with the first user ;
- and further to the communication,
- a step of storing in the server a list comprising user identifications ;
- a step of archiving in the terminal a connection reference relative to the communication.

6. (NEW) Method according to the claim 5, comprising the step of re-establishing a communication between at least the two of these users following a request of one of the users, the step of re-establishing comprising the following steps:

- sending by one of the users to the server the connection reference ;
- searching in the server the list of users corresponding to said connection reference ;
- establishing a communication between this user and another user of this list.

7. (NEW) Server device for establishing communications, said device being linked to at least two television receiver terminals; said server device comprising :

- means for receiving from users data relative to a program watched by the user through their respective television receivers,
- means for storing data sent by users through said television receiver terminals, as well as addresses of said users,
- means for establishing a communication between at least two users which matching data, using said user addresses.

8. (NEW) Server device according to claim 7, further comprising a memory means for storing at least a list of users identifications and a connection reference relative to a previous communication, and communication means to re-establishing a communication between at least two user of the list when it receive from one of these user a request for re-establishing a communication, said request comprising the connection reference.

9. (NEW) Server device according to claim 7, comprising a memory containing the addresses of the users of a list, the user's address is not transmitted to the other user.

10. (NEW) Device according to claim 7, wherein it comprises communication means to establishing said communication over the telephone network, said communication between the two users being by audio.

11. (NEW) Television receiver terminal comprising a communication module for establishing a communication with a server device through a communication network, said receiver comprising :

- a user interface for requesting a connection with another television receiver terminal through the server,
- a microprocessor for transmitting data relative to the program watched by the user on said terminal to the server along with the request for the connection.

12. (NEW) Television receiver terminal according to claim 11 comprising a means for re-establishing a connection, this means emitting to the server a connection reference of a past connection for requesting the server to set up again a previous connection.

IN THE ABSTRACT:

Please add the following Abstract.

-- A method for establishing communications in a system comprising at least two end devices and a server linked to said end devices by a network. The method comprises the steps of:

- activating, by a first user of a first end device, a transmission of data to the server, the data relating to the activities of the user on the device and informing the server that the first user wishes to communicate,
- checking, by the server, whether other users connected to the server want to communicate,
- based on data relative to the other users matching the data of the first user, selecting at least a second user among the other users; and
- establishing communication between said first user and said at least one second user. The invention also concerns a server device and a television terminal. The invention can be applied in particular in the field of interactive television. --

REMARKS

The specification has been amended to include a reference to the priority applications.

Claims 1-3 (as originally filed) have been canceled and new claims 4-12 have been added.

To meet the requirements of the United States, the Abstract is added.

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No fee is believed to have been incurred by virtue of this amendment.
However if a fee is incurred on the basis of this amendment, please charge such fee
against deposit account 07-0832

Respectfully submitted,
Philippe Letellier



Paul P. Kiel
Attorney for Applicant
Registration No. 40,677
609/734-9650

THOMSON multimedia Licensing Inc.
Patent Operation
PO Box 5312
Princeton, NJ 08543-5312

January 4, 2002

Method and device for establishing a communication

FIELD OF THE INVENTION

- 5 The invention concerns a method for establishing a communication between users connected to a communication network, especially in the frame of an interactive television system. It also concerns a server device for establishing the communication and terminals interacting with the users.

10 **BACKGROUND**

- Two popular forms of communication involve the telephone set on one hand and the Internet on the other. In order to use a telephone to communicate with somebody, the user has to know the appropriate telephone number to access the right person. Another type of
15 communication consists in participating in Internet chat groups. A chat group may be identified by a theme or a given topic, and communication takes place with people who are already connected.

- Known television receivers, for example digital satellite decoders,
20 generally have only a limited communication capacity, since their primary function is to be a media player. In the last years, a return channel has been added, for example under the form of a modem linked to the public telephone network, but this link was used less for inter-user communication than for data communication to a service provider.

- 25 The invention concerns a new communication concept, particularly adapted to the television environment.

SUMMARY OF THE INVENTION

- To that end, the invention relates to a method for establishing
30 communications in a system comprising at least two end devices and a

server linked to said end devices by a network wherein it comprises the steps of:

- activating, by a first user of a first end device, a transmission of data to said server, said data relating to the activities of said user on said device and
- 5 informing said server that said first user wishes to communicate,
- checking, by said server, whether other users connected to the server want to communicate,
- based on data relative to said other users matching the data of the first user, selecting at least a second user among said other users; and
- 10 - establishing a communication between said first user and said at least one second user.

With this solution, an end device offers to a user the possibility to be connected to another user in a new fashion. For example, the user can

15 browse in his Electronic Program Guide (EPG) to find an interesting program. He then zaps onto the corresponding service. If he wants to communicate with someone interested in the same program, the system in the server connects him to someone watching this same program or a program with the same topic. An advantage of the present invention is that

20 the connected users do not necessarily need to know their respective identities, i.e. the chat may remain anonymous.

Data relating to a user sent to the server may include information describing the program watched by the user and/or user profile information entered by

25 the user or derived from an analysis of his past interactions with the end device, such as an analysis of the programs watched in the past.

Another object of the invention is a server device for establishing communications, said device being linked to at least two end devices; said

30 server device further comprising:

-means for storing data sent by users through said end devices, said data relating to the respective activities of users on said end devices and addresses of said users;

5 -means for establishing communication between at least two users with matching data, using said user addresses.

BRIEF DESCRIPTION OF THE DRAWINGS

Other characteristics and advantages of the invention will appear through the description of a non-limiting embodiment of the invention,
10 described with the help of the enclosed drawings among which :

Figure 1 is a block diagram of the generic architecture of the proposed invention.

15 Figure 2 is a temporal diagram of the messages exchanged between two users and the server.

DETAILED DESCRIPTION

Figure 1 gives a view of the architecture of the system. Television
20 receiver terminals, such as DVB terminals, are deployed with a return channel, for example a modem connected to the Public Switched Telephone Network. The terminals are connected through the network to a server. The server establishes connections between two or more users, as will be described below. In this context, a connection between users is a
25 communication link for exchanging data, vocally or otherwise, between the connected users.

The server manages and updates a database of information relative to users requesting a connection, to current connections between users and to past connections between users.

30 The database contains the following data, updated in real time:

(a) A list of users requesting a connection, along with the following information for each user;

- A user identification, billing address
- Identification of a program currently watched by a user
- 5 • Profile of the user (Sex, age, preferred topics...)
- An address (such as a telephone number or an email address or an IP address or any other type of address) required to establish a connection with the user
- ...

10

(b) A list of current connections, and for each connection the group of connected users

(c) An archive of data relating to past connections, along with the following data for each connection:

15

- A unique connection reference "Id",
List of users having participated in a communication in the past, along with the information given in (a) above.
- Statistics relating to the connection: The time of the beginning and ending of the connection...

20

A User Interface is running on each terminal. This user interface has the following functions:

25

- Profile definition menu of the user (sex, age, connection name, preferences, etc ...);
- Connection request menu, to inform the server of the user's wish to be connected to someone;
- Zapping mode, for switching between programs ;
- Function to stop a connection;

- Function to reestablish a connection, with the connection Id of the past connection as a parameter, to request the server to set up again a previous connection ;
- 5 • Menu to accept or reject a request for a connection coming from the server to set up again a previous connection ;
- A connection Id browser to obtain information on a connection description, to enable the user to reestablish a former connection ;
- Function to request deletion of a connection Id in the server's archives to eliminate a past connection involving a user who does not want
10 such a connection to be reestablished.

According to the present embodiment, a connection is set up between two users. Nevertheless, it is of course possible to connect a greater number
15 of users.

A connection is established through the server, using the modems. The connection may be vocal, i.e. the user's voice is compressed by the receiver using standard software and sent over the telephone line to the other user's receiver for decompression, or may be in the form of an on-screen chat, if
20 proper means for entering characters (i.e. a keyboard) are available.

A potential dynamic behavior (see figure 2) of the system is: A user 1 is watching television channel A. He calls the server to ask for a connection with someone watching the same content. The receiver of this user sends to
25 the server the user related data identified at (a) above. The server adds a new field to its list of people interested by a connection. While waiting for his connection, the user 1 zaps from channel A to channel B. The terminal sends automatically a message to the server to update the program Id watched by the user. The server updates its data relating to user 1. When
30 the server finds another user with the adequate characteristics, it connects the user 1 and the user 2 for an audio conference. The user's address is not

transmitted to the other user: unless the users decide to exchange their addresses, they stay anonymous. The server updates its list of connected users with a unique connection Id designating the new connection. The user 1 and user 2 terminals archive the connection Id for a potential future reconnection. The user 1 and user 2 are able to discuss together directly, as during a telephone communication. When one of the users wants to stop the communication, he interacts with the terminal's user interface. The terminal sends a message to the server to stop the connection. The server sends a disconnection message to the different users and closes the connection.

10

Another potential dynamic behavior, illustrated by the lower part of figure 2 is: following the previous connection, the user 2 wants to communicate again with user 1. User 1 refused to give him his direct phone number during the previous connection. User 2 browses through the previous connection Id list and selects the appropriate Id.

15

The terminal sends a message to the server and transfers the connection Id. The server extracts from the connection archives the different parameters to set up the connection. It sends a message to the user 1 terminal to request a connection set up. If the user 1 refuses the connection or if he is not available, the server sends to user 2 a message indicating the connection request has been rejected. If the user 1 accepts the connection, the server sets up the connection between the two users.

20

According to a variant embodiment, in case of absence of a user (e.g. the user's receiver is in stand-by mode), the server leaves an email message informing the user of the failed connection request.

25

An important advantage of the invention is that the connection is managed anonymously by the server. It means the user phone numbers or addresses are known exclusively to the server. This is an important protection for the users.

30

The network used in the system can be a low bandwidth network, such as the public switched telephone network, but can be also the cable return channel.

- 5 The invention is independent of the communication protocol used between the terminals and the server.

The terminal can be a television set connected to a digital satellite set top box with a return channel based on the phone line. The remote control can
10 be equipped with a microphone and an HF connection to the set top box to transmit the voice signal. This voice signal is sampled in the set top box. The user interface of the set top box is extended with the functionality defined above. The user can access a corresponding menu by activating a button on the screen of the television set. The terminal also comprises a
15 microprocessor for executing a software program for handling user interaction and the communication protocol with the server.

The invention can be adapted to other environments by the Man Skilled in the Art, in particular video game consoles. If the network is small
20 the server functionality can be handled by one terminal playing the server role. The server can measure the time of connection to bill the service based on the duration of a connection. The communication can be set up between more than 2 users. The system can be enhanced using videophones or Webcams rather than a pure audio connection. The user profile can be used
25 as an element to choose the most adequate user among the users watching a given target program.

Claims

1. Method for establishing communications in a system comprising at
5 least two end devices and a server linked to said end devices by a network
wherein it comprises the steps of:
- activating, by a first user of a first end device, a transmission of data to said
server, said data relating to the activities of said user on said device and
informing said server that said first user wishes to communicate,
 - 10 - checking, by said server, whether other users connected to the server want
to communicate,
 - based on data relative to said other users matching the data of the first
user, selecting at least a second user among said other users; and
 - establishing a communication between said first user and said at least one
15 second user.

2. Server device for establishing communications, said device being
linked to at least two end devices; said server device further comprising:
- means for storing data sent by users through said end devices, said data
20 relating to the respective activities of users on said end devices and
addresses of said users;
 - means for establishing communication between at least two users with
matching data, using said user addresses.

- 25 3. Television receiver comprising a communication module for
establishing a communication with a server device through a communication
network, said receiver further comprising:
- a user interface for requesting a connection with another television receiver
through the server,
 - 30 -a microprocessor for transmitting data relating to the user to the server,
along with the request for the connection.

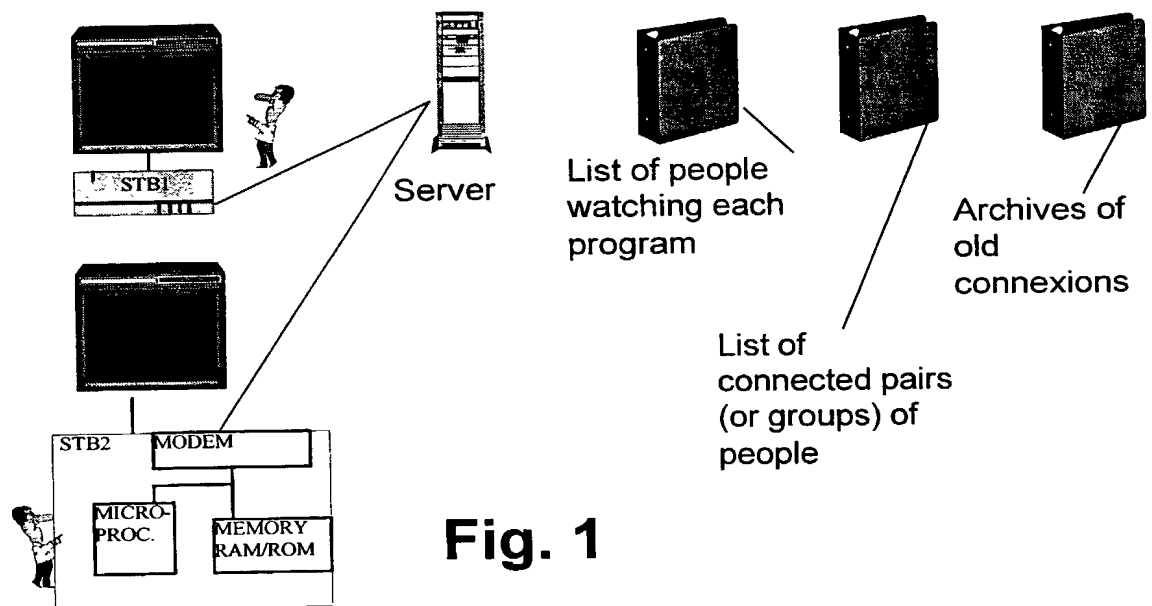
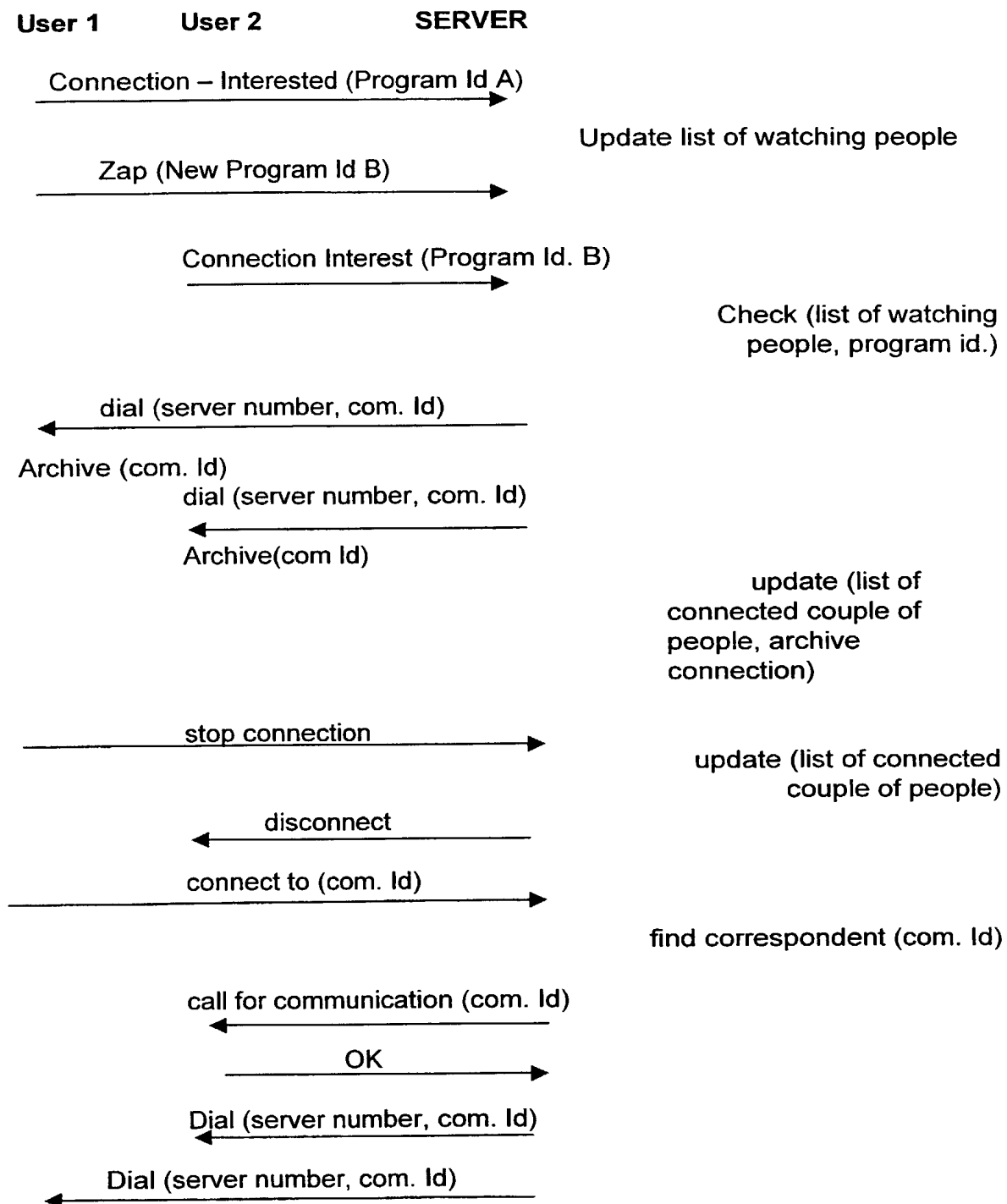


Fig. 1

**Fig. 2**

DECLARATION FOR UNITED STATES PATENT APPLICATION,
POWER OF ATTORNEY, DESIGNATION OF CORRESPONDENCE ADDRESS

As a below named inventor, I hereby declare that my residence, post office address and citizenship are as stated below next to my name, and that I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

METHOD AND DEVICE FOR ESTABLISHING A COMMUNICATION

the specification of which

(CHECK ONE) () is attached hereto.
(XX) was filed on July 12, 2000, Application Serial. No. PCT/EP00/06634
and was amended on February 8, 2001

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with 37 CFR 1.56(a).

I hereby claim foreign priority benefits under 35 USC 119 of any foreign application(s) for patent, utility model, design or inventor's certificate having a filing date before that of the application(s) on which priority is claimed:

Prior Foreign Application(s)			Priority Claimed	
Number	Country	Date Filed	Yes	No
99401752.3	EP	July 12, 1999	xx	

I hereby claim the benefit under 35 USC 120 of any US Application(s) listed below, and, insofar as the subject matter of each of the claims of this Application is not disclosed in the prior US application in the manner provided by the first paragraph of 35 USC 112, I acknowledge the duty to disclose information which is material to the examination of this application in accordance with 37 CFR 1.56(a).

Serial No.: _____ Filed: _____

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that wilful false statements and the like so made are punishable by fine or imprisonment, or both, under of 18 USC 1001 and that such wilful false statements may jeopardize the validity of the application or any patent issued thereon.

I hereby appoint the following attorneys to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith: Joseph S. Tripoli (Reg. No. 26,040), Dennis H. Irlbeck (Reg. No. 26,372), Eric Herrmann (Reg. No. 29,169) and Joseph J. Laks (Reg. No. 27,914) Telephone: (609) 734-9813.

Address all correspondence to Joseph S. Tripoli, Patent Operations - Thomson multimedia Licensing, Inc. - CN 5312 - Princeton, New Jersey 08543-0028.

Signature: Philippe Letellier Date: 16 day of December, 2001.
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